

ABSTRACT

A piezo-electric actuator is provided which is capable of providing large vibration amplitude, is adjustable for resonance frequency, and has high reliability while avoiding an increase in outer dimensions.

A piezo-electric actuator comprising: piezo-electric element 1a having piezo-electric body 3a which is provided with at least two opposing surfaces, wherein the surfaces perform an expanding and contracting motion in accordance with the state of an electric field; a constraint member 21a for constraining piezo-electric element 1a on at least one of the two surfaces, a supporting member disposed around constraint member 21a, and a plurality of beam members 22a each having both ends fixed to constraint member 21a and supporting member 4a, respectively, wherein each beam member has a neutral axis for bending in a direction substantially parallel with the constrained surface, wherein the constraint member vibrates by vibration which is generated by the constraining effect between the constraint member and the piezo-electric element, and is amplified by the beam members.